

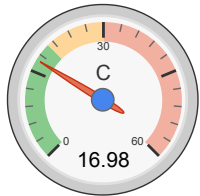


all data without guarantee - Accuracy: +/-10%

propCalc - Propeller Calculator

News | Toolbox | Easy View | Help | Submit Specs | Language: english

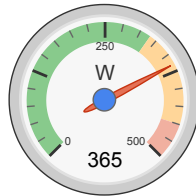
General	Model Weight: 727 g w/o Drive 25.6 oz	# of Motors: 1 (on same Battery)	Wing Area: 40 dm ² 620 in ²	Drag: simplified 0.05 Cd	Cross Section: 0 dm ² 0 in ²	Field Elevation: 500 m ASL 1640 ft ASL	Air Temperature: 25 °C 77 °F	Pressure (QNH): 1013 hPa 29.91 inHg
Battery Cell	Type (Cont. / max. C) - charge state: LiPo 2200mAh - 20/30C - normal	Configuration: 3 S 1 P	Cell Capacity: 2200 mAh 2200 mAh total	max. discharge: 85%	Resistance: 0.010 Ohm	Voltage: 3.7 V	C-Rate: 20 C cont. 30 C max	Weight: 52 g 1.8 oz
Controller	Type: max 50A	Current: 50 A cont. 50 A max	Resistance: 0.005 Ohm	Weight: 65 g 2.3 oz	Battery extension Wire: AWG10=5.27mm ²	Length: 0 mm 0 inch	Motor extension Wire: AWG10=5.27mm ²	Length: 0 mm 0 inch
Motor	Manufacturer - Type (Kv) - Cooling: Cyclon - Mini Elite Punch (1451) - medium	KV (w/o torque): 1451 rpm/V Prop-Kv-Wizard	no-load Current: 2.2 A @ 6 V	Limit (up to 15s): 450 W	Resistance: 0.029 Ohm	Case Length: 50 mm 1.97 inch	# mag. Poles: 14	Weight: 80 g 2.8 oz
Propeller	Type - yoke twist: Aeronaut CamCarbon - 0°	Diameter: 9 inch 228.6 mm	Pitch: 6 inch 152.4 mm	# Blades: 2	PConst / TConst: 1.07 / 0.99	Gear Ratio: 1 : 1	Flight Speed: 0 km/h 0 mph	<input type="button" value="calculate"/>



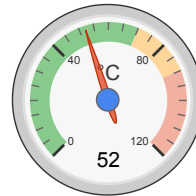
Load:



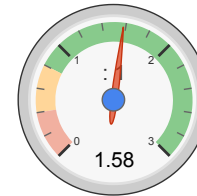
Mixed Flight Time:



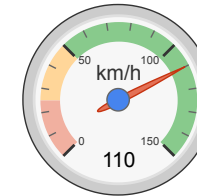
electric Power:



est. Temperature:



Thrust-Weight:



Pitch Speed:

Remarks:

Battery	
Load:	16.98 C
Voltage:	9.96 V
Rated Voltage:	11.10 V
Energy:	24.42 Wh
Total Capacity:	2200 mAh
Used Capacity:	1870 mAh
min. Flight Time:	3.0 min
Mixed Flight Time:	6.6 min
Weight:	156 g
	5.5 oz

Motor @ Optimum Efficiency	
Current:	31.54 A
Voltage:	9.98 V
Revolutions*:	12561 rpm
electric Power:	314.7 W
mech. Power:	253.4 W
Efficiency:	80.5 %

Motor @ Maximum	
Current:	37.35 A
Voltage:	9.77 V
Revolutions*:	11997 rpm
electric Power:	365.0 W
mech. Power:	292.9 W
Efficiency:	80.2 %
est. Temperature:	52 °C 126 °F
Wattmeter readings	
Current:	37.35 A
Voltage:	9.96 V
Power:	372 W

Propeller	
Static Thrust:	1677 g 59.2 oz
Revolutions*:	11997 rpm
Stall Thrust:	965 g 34 oz
avail. Thrust @ 0 km/h:	1677 g
avail. Thrust @ 0 mph:	59.2 oz
Pitch Speed:	110 km/h 68 mph
Tip Speed:	517 km/h 321 mph
specific Thrust:	2.65 g/W 0.09 oz/W

Total Drive	
Drive Weight:	331 g 11.7 oz
Power-Weight:	392 W/kg 178 W/lb
Thrust-Weight:	1.58 : 1
Current @ max:	37.35 A
P(in) @ max:	414.6 W
P(out) @ max:	292.9 W
Efficiency @ max:	70.6 %
Torque:	0.23 Nm 0.17 lbf.ft

Airplane	
All-up Weight:	1058 g 37.3 oz
Wing Load:	26 g/dm ² 8.5 oz/ft ²
Cubic Wing Load:	4.2
est. Stall Speed:	25 km/h 16 mph
est. Speed (level):	97 km/h 60 mph
est. Speed (vertical):	38 km/h 24 mph
est. rate of climb:	10.7 m/s 2101 ft/min

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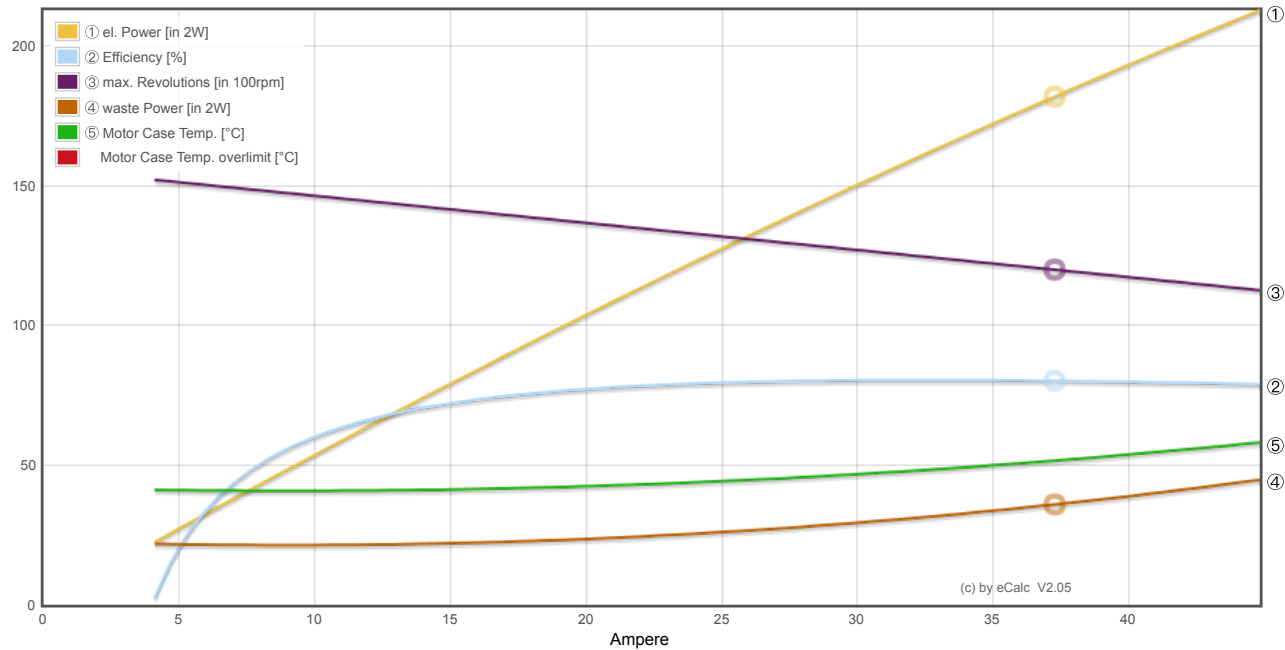
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Motor Partial Load

Propeller	Throttle	Current (DC)	Voltage (DC)	el. Power	Efficiency	Thrust	Spec. Thrust	Pitch Speed	Speed (level)	Motor Run Time				
rpm	%	A	V	W	%	g	oz	g/W	oz/W	km/h	mph	km/h	mph	(85%) min
1800	12	0.3	11.1	3.2	30.8	38	1.3	11.8	0.42	16	10	-	-	385.3
2700	18	0.6	11.1	6.8	48.9	85	3.0	12.5	0.44	25	15	-	-	181.4
3600	25	1.2	11.1	12.9	61.3	151	5.3	11.7	0.41	33	20	-	-	95.7
4500	31	2.0	11.0	22.3	69.1	236	8.3	10.6	0.37	41	26	36	22	55.1
5400	38	3.3	11.0	35.9	74.0	340	12.0	9.5	0.33	49	31	43	27	34.0
6300	45	5.1	10.9	54.7	77.1	462	16.3	8.4	0.30	58	36	51	32	22.2
7200	52	7.4	10.9	79.7	79.0	604	21.3	7.6	0.27	66	41	58	36	15.1
8100	60	10.5	10.8	111.9	80.2	764	27.0	6.8	0.24	74	46	65	41	10.7
9000	68	14.5	10.7	152.2	80.9	944	33.3	6.2	0.22	82	51	72	45	7.7
9900	76	19.5	10.5	201.7	81.2	1142	40.3	5.7	0.20	91	56	80	50	5.7
10800	86	25.8	10.3	261.5	81.3	1359	47.9	5.2	0.18	99	61	87	54	4.3
11700	96	33.7	10.1	332.7	81.3	1595	56.3	4.8	0.17	107	66	94	59	3.3
11997	100	37.4	10.0	365.0	80.2	1677	59.2	4.6	0.16	110	68	97	60	3.0

Motor Characteristic at Full Throttle



Important Note:
 Before flight recheck your max. current! If your Current, el. Power or RPM are over the manufacturers limits your motor, controller and/or battery may take damage! **Verify before flight by measurement!**

for printing use Landscape format
 * The manufacturer limitation is NOT monitored
 ** Testdata with reduced accuracy